Graphical Tester for Otoplastics

With Bluetooth® Control

**Installation instructions for
Windows 10 [from version1803]**

2018

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1 INSTALLING A BLUETOOTH® LEAKAGE TESTER

1.1 Introduction

This article walks you through the process of adding a Bluetooth® *leakage tester* to your Windows 10 computer, as well as giving you some directions to take care for the process to run smoothly.
This installation guide is intended for Windows 10 [version 1803 up]; 32-bit and 64-bit are supported.

1.2 Before adding the Bluetooth® *leakage tester* to your computer

Connect to the Internet if the computer is not already connected. Windows 10 should be up to date. You might manually check for Windows 10 updates e.g.:

- select the **Start** ⊞ button > **Settings** ⚙ > **Update and Security** ⟳

If your computer does not already have a built-in Bluetooth® radio you can, instead, use a USB Bluetooth® dongle or micro adapter.
You will find generic information on how to set up a Bluetooth® dongle in §3.7.

1.3 Finding and *pairing with* your Bluetooth® *leakage tester*

This paragraph describes the process of first finding then pairing a Bluetooth® *leakage tester* to your computer. The whole Bluetooth® installation may take several minutes.

There are several ways to instruct Windows 10 to start looking for Bluetooth® devices in its neighbourhood, we used this one:

- switch-on your *leakage tester*
- select the **Start** ⊞ button > **Settings** ⚙ > **Devices** 🖳 > Bluetooth & other devices
- slide the Bluetooth® switch to **On**
- click ＋ Add Bluetooth or other device
- click ⁑ Bluetooth

   after a short while the *Add a device* window should list the name of your device, e.g. BLTTEST; tap the device name and the system will connect and set up the device; at the end the device is paired and ready to go!.

1.4 When a *paring code* is required

With the introduction of the Secure Simple Pairing (SSP) mechanism for testers delivered from 2014, there is no need to enter a pairing code anymore. As implied by the name, this method just works: the tester will be paired to your system and you only have to close the window. During this procedure your device will be configured by Windows and after a while will be ready for use.

If it turns out that pairing code is required, just follow the instruction on the screen and when asked for a pairing code, enter **1234**, this is the pairing code your *leakage tester* comes with.

1.5 Looking up the *serial port* number*

The last thing to do before the hardware installation is complete is to find out through which port Windows 10 wants to communicate with this *leakage tester.* The controlling software (discussed in chapter 2) needs to know this *(serial) port number*. You have to determine the port nr. one time.
As an alternative, in the controlling software versions from V3.00 one has the opportunity to detect and store the port-number automatically.

A method on how to find the *port number* is given here.

- switch-on your *leakage tester*
- select the **Start** ⊞ button > **Settings** ⚙ > **Devices** ▦ > Bluetooth & other devices
- slide the Bluetooth® switch to **On**
- on the right side of this settings window tap 'Devices and printers'
- in the *Control Panel* locate your device, right-click it and select *Properties*

    You will find the port number both under the tab Hardware as well as Services.
    When asked, fill in this number as the *Outgoing* port number for your tester (e.g. COM6).

* not relevant when using automatic detection (from v3.00 up), or when using the UWP app.

2 INSTALLING THE BLUETOOTH® CONTROL SOFTWARE

2.1 Downloading the *standard* control software

The standard App for Windows 10 can be downloaded on our site and is stored in a *zip*-file, the name depends on version/language. At this time the *Dutch* version is called **OtoTestBLT3.25_*NL*.zip**, URL:
https://www.cursorengineering.nl/?Otoplastiek_Testers:Voor_Bluetooth:Software_Windows_BLT

2.2 Software location and un*zip*

The standard software bundle you are about to install is so-called portable software. This means the software is installed into a directory as a whole and relevant files for running the software live inside this directory. The software bundle doesn't change registries nor writes it to some system directory. Therefore you can install (or, better, unpack) the software to any directory you want and run it from there. So create a new directory where you want the software for your *leakage tester* to reside, e.g. C:\LeakageTester. Transfer the *zip*-file from your download directory to this new folder and un*zip* it. The application resides in the subdirectory C:\LeakageTester\OtoTestBLTv3.25_*NL* and is called OtoTestBLT[.exe]. You may want to create a shortcut on your desktop. If there is a need to control more than one *leakage tester* with the same computer, you can create separate directories for each tester and distinguish between them by choosing different names for the shortcuts.

2.3 Bringing the *standard* software into operation

Double-click on 'OtoTestBLT' and, *before* the following screen appears, Windows 10:

- might ask you for a **Security Warning** confirmation: *confirm*
- might want you to update the **.NET Framework**: *follow the instructions to upgrade the framework to at least version 4.0, then return to this paragraph (§2.3)*
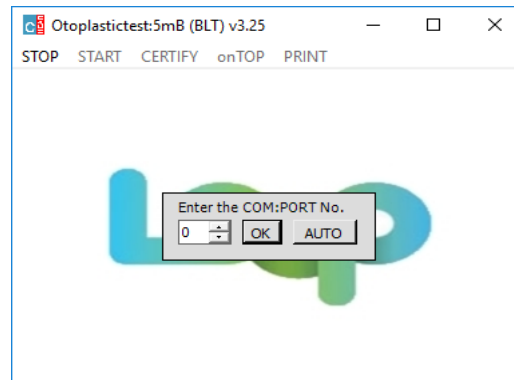
Click **AUTO** and the software will find your BLT tester and store the port number (in the file COMx.ini) for you; this may takes a while. As an alternative enter the number for the *Bluetooth® serial port*; this is *the* port number through which the computer communicates with your tester. Read §1.5 'Looking up the *serial port* number' on how to find this number, and click **OK**.

This completes the installation of your *leakage tester* on Windows 10.

2.4 Installing the *UWP* control software

There is also a special Windows 10-only app for the Universal Windows Platform (UWP), URL:
https://www.cursorengineering.nl/?Otoplastiek_Testers:Voor_Bluetooth:App_Windows_10_UWP
Follow the instruction on this web-page and in the Microsoft Store.

2.5 Bringing the *UWP* software into operation

After installation, using the UWP version is straight forward, just select your device and you are ready to go. There is an additional installation guide for the UWP app.
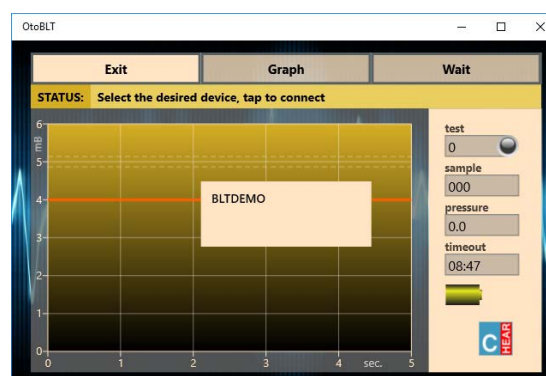
Picture 2.5.1: OtoBLT on Windows 10 UWP

3 TROUBLESHOOTING BLUETOOTH® CONNECTIONS

3.1 Common pitfalls

Ideally, adding Bluetooth*®* devices should be easy, but there are some "pitfalls" to look out for. Check the following items to troubleshoot Bluetooth® connections:

- make sure that your PC or laptop actually has Bluetooth®, check §3.2 below
- make sure that your Bluetooth® is turned **ON**; any proprietary software might have a switch that enables or disables it
- make sure that your *leakage tester* is powered-on and make sure that the LED power indicator is on (check batteries)

3.2 Finding out if you have (built-in) Bluetooth

There are several ways to find out whether you have Bluetooth® services available on your computer or not (is my computer Bluetooth-enabled?), we mention two methods here:

one:
- check the taskbar at the bottom of the screen to find out if there is a 🔵 (Bluetooth®) logo, sometimes it's in a container: *Show hidden icons*

two:
- select the **Start** ⊞ button > **Settings** ⚙ > **Devices** 🖳 > Bluetooth & other devices and check whether there is the Bluetooth® slide switch ⬤ visible

3.3 Looking up the *Bluetooth® serial port* number

The control software needs to know the *Bluetooth® serial port* number, to find out this number follow the steps as described in §1.5.

3.4 Incoming or Outgoing Serial Port

Not very likely, but if Windows 10, at a certain point, wants you to decide between a so called **Incoming** or **Outgoing** 'serial port' always select the **Outgoing** port.

3.5 Control software cannot make a connection

If your *Leakage Tester* is visible in the **Devices and Printers** panel in section **Unspecified (n)**, but the control software is not able to connect to the tester, or the connection is instable, check:

- whether you are using the control software for Bluetooth® testers and not, accidentally, for USB testers
- the whole Bluetooth® chain, read §3.1 *Common pitfalls*
- when using separate dongles, sometimes the generic Windows 10 *Bluetooth driver* is not good enough; try to install the micro adapter (dongle) with the software that came with it (CD/DVD-disk, download), or try to find the appropriate software on the manufacturer's site to build a precisely matching Bluetooth-stack

You may try to remove the device and let Windows add your *device* again.

3.6 USB Bluetooth® dongle installation

3.6.1 *Before plugging-in the dongle*

Determine which USB port on your computer you want to connect your Bluetooth® *dongle* to. If your computer has USB ports on the front, consider using one of those if you plan to frequently connect and disconnect the dongle although it is a tiny device. **Important:** most dongles remember the USB port they were plugged-in and installed on, read §3.7 for further information on this issue.

3.6.2 *Installation*

Windows 10 is equipped with a good USB Bluetooth® dongle plug-and-play *wizard*. Just plug-in your dongle to the computer's USB port of your choice. Windows 10 should show the window below
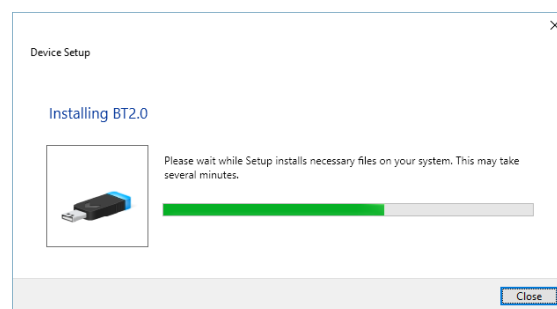
and silently starts searching the internet for specific drivers for your *dongle*. When the window closes the installation is complete and a Bluetooth switch will be visible in > **Devices** 🖥️ , see §3.2.

3.7 Changing USB ports when using USB *Bluetooth®* dongles

When you utilize a USB Bluetooth® dongle (which happens to be removable) you should be aware of the fact that Windows expects to find your *leakage tester* via the dongle **in the very same USB port** you **initially** installed your device on. If you remove the dongle and plug it in a different USB port, Windows (silently) re-installs it and will come up with a different *Bluetooth® serial port*-number. In this case, when you start the controlling software, the message (e.g.) 'no tester detected on COM5' will show up. Terminate the control software, now you have two options, one:

- connect the dongle to the original USB port
- resume

The second option is to let Windows 10 re-install the dongle. You will have to tell your previous paired leakage tester to communicate on the new port number. To do this, proceed as follows:

- in the folder where your control software resides (C:\LeakageTester\OtoTestBLTv3.25_*NL*) you will have to remove the file 'COMxx.ini' (where 'xx' is the initial COM port number)
- determine the new port number (§1.5) if you do not want to use the AUTO function
- start the control software and enter the new port number or click AUTO